

# Trowbridge Dam

## Emergency Action Plan Background Information

### Dam Operator:

John Lerg  
Wildlife Biologist  
Dept. of Natural Resources  
621 North 10<sup>th</sup> Street  
Plainwell, Michigan 49080  
269-685-6851

### Alternate:

Sara Schaefer  
District Wildlife Biologist  
Dept. of Natural Resources  
621 North 10<sup>th</sup> Street  
Plainwell, Michigan 49080  
269-685-6851

EPA Region 5 Records Ctr.



384649

### Hazard Potential Classification:

High

### Watercourse:

Kalamazoo River

### Location:

SW 1/4 Sec. 12, T 1N, R 13W, Allegan  
County Just upstream of 26<sup>th</sup> Street Bridge

### History:

This dam was built to produce hydroelectric power. When it was decommissioned, the impoundment water level was lowered to the sill (fixed crest) elevation of the gated spillways. Due to dam design, the impoundment could not be lowered further. Subsequently, portions of the dam's power house and embankments were removed. The normal difference between headwater and tailwater (hydraulic head) is now approximately 11 ft. The remaining impoundment surface area is about 59 acres.

At some time after the Department of Natural Resources (DNR) acquired ownership of this dam, serious contamination (PCBs) was found in the sediments which have accumulated in the impoundment. These contaminants are found both in the sediments still covered by impoundment and in the sediments exposed after the dam was drawn down. Many of these contaminated sediments would be released into the floodwaters by a failure of this dam.

### Types of Emergencies:

- 1) Failure during severe flooding.  
This failure mode will generally cause very high downstream flood stages as released impoundment waters are added to the already high flood stages. At any time when significant flooding may threaten the dam, it must be checked periodically for indications of potential failure. The checks should be coordinated by DNR staff and emergency personnel.
- 2) Failure during normal flow conditions.  
This failure mode usually results in less severe downstream flood stages than an overtopping failure, but is often more dangerous because it generally occurs without warning.
- 3) Potential failure in progress.  
In this situation, quick action may prevent a failure. It also provides the most lead time to announce the potential danger.

# **Trowbridge Dam**

## **Emergency Action Plan**

DNR staff have made arrangements with local contractors who are available for immediate response in the event of an emergency. A listing of these contractors is found in Attachment 3.

The failure or potential failure of Trowbridge Dam shall be immediately reported by DNR staff to the **Allegan County Emergency Preparedness Coordinator, Mr. Scott Corbin**

**269-673-0571 (daytime)**

**911 (after business hours)**

Staff shall note whether failure **HAS** occurred or that **POTENTIAL** for failure exists. Staff shall also note whether failure is **CONFIRMED**. If failure is unconfirmed, staff shall then travel to the site to assess the situation and advise coordinator of findings. DNR staff shall then mobilize local contractor(s) if appropriate.

### **Emergency Preparedness Coordinator shall:**

1. Mobilize appropriate emergency services personnel.
2. Announce to the media the dam's failure or potential failure. This announcement shall include the notice of threatened contamination (attachment 1).
3. Directly warn and/or evacuate flood prone areas. At the time of this writing, no residences are known to be threatened. However, the following areas may be occupied:
  - a) The parking areas adjacent to Imperial Carving Company.  
**Telephone: 269-673-3867 or 269-673-4903**
  - b) Jaycee Park, Corner of Monroe Street and Chestnut Street.
  - c) Fairgrounds, Corner of Allegan Co. Fair Drive and Park Drive.
  - d) State owned land along the Kalamazoo River between Trowbridge Dam and the City of Allegan. Recreational users may be threatened.
4. Check all bridges between Trowbridge Dam and Lake Allegan for flood damage. Be prepared to close bridges as necessary.

These areas are highlighted on the map found in Attachment 2.

After all emergency personnel are alerted, the Department of Environmental Quality's Dam Safety Unit shall be advised.

**Daytime: 517-373-1170; After hours: 1-800-292-4706 (PEAS)**

# **Attachment 1**

## **Notice of Threatened Contamination**

Failure of the Trowbridge Dam may result in the mobilization of contaminated sediments from within the dam's impoundment and/or the floodplain downstream from the dam. These contaminants include polychlorinated biphenyls (PCBs). PCBs are considered hazardous substances and are a probable human carcinogen. Contact with flood waters and sediment deposits should be avoided.

### **Background Information**

On August 30, 1990, the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund site (site) was officially included on the National Priorities List (NPL) pursuant to the Comprehensive Environmental Response, Compensation and Liability Act, 1980 PA 96-510. The site was placed on the NPL because the sediments, soils, water column, groundwater and biota within this site are heavily contaminated with PCBs, a hazardous substance and probable human carcinogen. This contamination is a result of area paper mills discharging the waste from their recycling of carbonless copy paper.

The site boundaries includes a 3-mile stretch of Portage Creek, from Cork Street just above the Bryant Mill Pond, in the City of Kalamazoo, Michigan, to its confluence with the Kalamazoo River, and along a 77-mile stretch of the Kalamazoo River from the Morrow Dam to the furthest downstream point of the contaminant migration, which may be the mouth of the river at Lake Michigan. Included within this site are the former Bryant Mill Pond, Plainwell Impoundment, Otsego Impoundment, Trowbridge Impoundment and hundreds of acres of PCB contaminated wetlands and floodplains located behind these dams.

The data clearly indicated that PCBs are continuing to migrate further downstream and that upstream sources owned by the responsible parties are causing the ongoing contamination. As a direct result, the soil, sediments, surface water, groundwater, and fish at the site are contaminated with PCBs. Direct contact with, inhalation of, or ingestion of soils, sediments, surface water, groundwater, or fish poses a threat to both wildlife and human health. Annually, since 1977, the Michigan Department of Public Health has issued an advisory warning people not to eat the fish from the Kalamazoo River because of PCB contamination. The MDEQ estimates that the sediments contain well over 300,000 pounds of PCBs. The PCBs continue to migrate into the environment from these areas due to erosion, surface water runoff and groundwater infiltration. This migration of PCBs is contributing to the ongoing contamination to the soils, sediments, water column and biota both in and adjacent to the Kalamazoo River/Portage Creek and Lake Michigan.

Failure of any of the dams on this river would severely exacerbate the existing problems resulting from the PCB contamination noted above. The data indicate that dam failure would significantly increase the bioavailability of the PCBs to the wildlife resulting in greater injury to the natural resources and increased the health threat to humans.

### **For further information contact:**

Paul Buchultz  
Remediation and Redevelopment Division  
Department of Environmental Quality  
517-373-8174

**Trowbridge Dam**  
**Emergency Action Plan**

**Attachment #3**

**Excavating Contractors**

Leonard Roe 6 Weeks Street, Allegan Mi. 49010	269-673-4736
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Pat Knapp Excavating 5698 109th Avenue, Pullman, Mi. 49450	269-236-5606
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Broe's X-cavating 1817 64th Street, Fennville, Mi. 49408	269-543-4275
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Remington Excavating 40360-CR388, Bloomingdale, Mi. 49026	269-521-3350
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Al's Excavating 4515 134th Street, Hamilton, Mi. 49419	269-751-5158
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Van Dragt Land Improvement 11 130th Avenue, Fennville, Mi. 49408	269-857-2066
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D. J. Bentley 3036 110th Avenue, Allegan, Mi. 49010	269-673-2828
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Milbocker and Sons, Inc. 1256 29 <sup>th</sup> Street, Allegan, Mi. 49010	269-673-2195
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